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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Johji Mamiya

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EXAMINER

SINGH, DALIP K

ART UNIT

PAPER NUMBER

2628

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/725,979	MAMIYA ET AL.	
	Examiner	Art Unit	
	Dalip K. Singh	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 29-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 29-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/22/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to applicant's remarks dated June 6, 2006 in response to PTO Office Action dated January 17, 2006.
2. With regards to applicant's argument with respect to claim 1 that, "Ludtke is silent on whether the configuration command might be used to identify a specific CPU 106 of the display device and that the purpose of the configuration command is to initiate the presentation of the video stream on the multiple display configuration, instead of identifying the CPU 106", Examiner would like to draw applicant's attention to Ludtke col. 19, lines 49-52 "...It should also be apparent that multiple master devices 22 could be utilized to configure and control display devices within a multiple display configuration...". Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to include in the header information about identifying a particular panel processor as this would improve efficiency of the processing system. Also, this would work in tandem with the different channels to dictate which display devices receives the image data being transferred.
3. With respect to applicant's argument about motivation for combining Nicholson and Ludtke being that packetized data provides for robust data information transmission with capabilities for data error corrections and the fact that multiple master devices 22 or CPU 106's could be utilized in a multiple display configuration, it would have been obvious to a person of ordinary skill in the art to do so as processing burden is distributed to multiple master devices (...for the display devices capable of physically partitioning an image section, the master device 22 sends a configuration command to inform the display device which image section it is responsible for and to initiate the presentation of the video stream on the multiple display configuration. For the display devices which are not capable of physically partitioning an image section, the master device performs the physical partitioning, scaling and encoding...in this

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manner, both type of display devices are utilized within a multiple display configuration...col. 19, lines 37-52).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim(s) 1, 2 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,150,996 to Nicholson et al. in view of U.S. Patent No. 6,501,441 B1 to Ludtke et al.

a. Regarding claims 1 and 29, Nicholson et al. **discloses** a host (sign controller 18, Fig. 11) for executing an application, the host comprising a pre-processor (processor 240, Fig. 11); and a display (display module 12, Fig. 13) connected to the host (sign controller 18), the display (display module 12) displaying an image, wherein said host (sign controller 18) transfers image data to the display (display module 227...controller 18 communicates to each display module 12...to address each display module 12 and display information on sign 10...col. 7, lines 39-67), said display (display module 12) includes a panel control processor (microprocessor 62, Fig. 13) for processing the image data, and a panel memory (memory 64) for storing processed image data (...memory 64 for storing bit map information of several images to be displayed on the display module 12...col. 12, lines 1-26), wherein the processed image data in the panel memory (memory 64) is displayed as the image. Nicholson et al. **discloses** addressing each display modules 12 (...sign controller 18 performs a sequence of operations illustrated as a block diagram...to address each...display module...resets the address of each display module...after addressing each display 12, sign controller 18 prepares to display information...col. 14,

lines 7-67; col. 15, lines 1-45), the map block 320 creates a map of the addresses, map bit block 322 creates a display bit map for each address display module 12 and broadcast bit assignment block 324 sends a control signal having a packet of information (...a packet of information containing the address and the appropriate display information for each display module 12...col. 15, lines 45-67). However, Nicholson et al. **is silent about** the packet of information having a specific header that identifies the panel control processor and a body including the image data. Ludtke et al. **discloses** a format of data packet for transmitting data from the host to the display device (...data packet includes a packet header and a data field or payload...packet header includes a data_length field...the remaining data portion contains the actual video data payload...within...the packet...col. 17, lines 59-67; col. 18, lines 1-47). Ludtke et al. **further discloses** the master device 22 sending a configuration command to inform the display device which image section it is responsible for (...a configure command is utilized by a control device to...set up a multiple display configuration...device_ID_list //specifies a list of 1394 GUIDs, one for each display device to use...col. 19, lines 30-67; col. 20, lines 1-50). Fig. 4 of Ludtke et al. **discloses** display devices 24-40 configuration with a CPU 106 similar to the control processor recited in the instant claim limitations. Fig. 3 and Fig. 4 of Ludtke reference **discloses** wherein master device 22 physical interface circuit 92 of Fig. 3 is communicating with display device 24's physical interface circuit 102; data being sent in a stream of data packets, each including an address value corresponding to a memory location within the appropriate display device (col. 4, lines 15-35). *In addition, Ludtke discloses that multiple master devices 22 could be utilized to configure and control display devices within a multiple display configuration (col. 19, lines 49-52).*

Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify the device as taught by Nicholson et al. with the feature

“packetized data structure detailing a header identifying the panel specific processor and a body that includes the image data and multiple master devices utilized to configure and control display devices within a multiple display configuration” as taught by Ludtke et al. **because** packetized image data provides for robust data transmission in digital format resulting in reduced data transmission errors and the capabilities for data error corrections; and multiple master devices distribute processing loads thus improving data processing capabilities.

b. Regarding claim 2, Nicholson et al. **discloses** wherein said display refreshes the image using image data stored in said panel memory (memory 64)(...transfer bit block 330 transfers the bit map information from memory 64 to message output portion 72 and to input message input 88 of the light driver 87...col. 16, lines 1-15).

6. Claim(s) 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,150,996 to Nicholson et al. in view of U.S. Patent No. 6,501,441 B1 to Ludtke et al. as applied to claim 29 above, and further in view of U.S. Patent No. 5,636,631 to Waitz et al.

a. Regarding claim 30, Nicholson-Ludtke combination **is silent** about receiving image data showing image data showing different display characteristics and data quantities. Waitz et al. **discloses** *processing of two types of display data, monochrome and color; and pixels in the image are tagged as comprising either monochrome information or color information and a block of image data being readily separated into those pixels which are to be reproduced in color and those points which are to be reproduced in monochrome and further such tagging also enables the separate encoding of the respective data values, such as three values (red, green, and blue) for color pixels and highly precise luminance values for reproduction as monochrome values (see col. 1, lines 66-67; col. 2, lines 1-10). Also, Waitz et al. discloses different data quantities (...Tag records may contain varying amounts of data concerning an*

image...col. 3, lines 10-15; col. 3, lines 52-55). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Nicholson-Ludtke combination with the feature “reception of image data showing different display characteristics and data quantities” as taught by Waitz et al. **because** it provides for efficient management of image data.

b. Regarding claim 31, Nicholson et al. **discloses** said first panel control processor (microprocessor 62, Fig. 13) for processing the image data, and a panel memory (memory 64) for storing processed image data (...memory 64 for storing bit map information of several images to be displayed on the display module 12...col. 12, lines 1-26;...system comprises...a plurality of...modules...the modules are in communication with the sign controller to receive data...in conjunction with a plurality of other sign modules...col. 2, lines 55-67; col. 3, lines 1-1-40).

7. Claim(s) 3, 4 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,150,996 to Nicholson et al. in view of U.S. Patent No. 6,501,441 B1 to Ludtke et al. as applied to claim 1 above, and further in view of U.S. Patent No. 6,323,854 B1 to Knox et al.

a. Regarding claims 3 and 4, Nicholson-Ludtke combination **is silent about** said host transfers image data showing a first resolution to said display and said display scales said transferred image data from having the first resolution to that having a second resolution. Knox et al. **discloses** as a means to reduce the bandwidth of data bus between host and said display, video data being sent as compressed data to the display where an interface then in turn decompresses the data for displaying purposes (...finally increasing resolution or color depth could be to some extent localized to the monitor rather than burdening the video controller...col. 3, lines 30-65...to reduce the bandwidth of data on the bus 210, preferably something less than the full uncompressed video data is transmitted from the video controller 200 the monitors 212...this

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compressed data is passed through a bus interface 305 over the bus 210 to the interface 214 within the monitor 212...the data is received in the interface 214 by a bus interface 306, where it is decompressed...col. 5, lines 10-67; col. 6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Nicholson-Ludtke combination with the feature "compressed data being uncompressed on the display side resulting in higher resolution images" as taught by Knox et al.

because it reduces bandwidth requirement between the video controller/monitor interface and improves efficiency.

b. Regarding claim 32, it is similar in scope to claim 3 above and is rejected under the same rationale.

Conclusion

8. Applicant's arguments presented are not persuasive. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(571) 272-7792**. The examiner can normally be reached on Mon-Friday (10:30AM-6:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Ulka Chauhan**, can be reached at **(571) 272-7782**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Please note that the new Central Official FAX number for application specific communications with the USPTO is **571-273-8300** (effective July 15, 2005).

Dalip K. Singh
Examiner, Art Unit 2628

dks
September 14, 2006


ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER